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EXAMINER

TIV, BACKHEAN

ART UNIT	PAPER NUMBER
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2151

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/812,139

Applicant(s)

HUDSON MICHEL, BARTLETT  
SCOTT

Examiner

Backhean Tiv

Art Unit

2151

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 19 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☒ Claim(s) 1,2,8,11,12,14,16 and 17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

Art Unit: 2151

**Detailed Action**

Claims 1-17 are pending in this application.

**Claim Objections**

Claims 1,2,8,11,12,14,16,17 are objected to because of the following informalities:

As per claim 1, line 7, "the steps of," the comma after of should be a colon, to read "the steps of :".

Claims 2, 8, 11,12,14 are objected to based on the same rationale as claim 1.

As per claim 16, line 22, "claim 15 wherein the", there should be a comma after wherein, to read "claim 15 wherein, the".

Claim 17 is objected to based on the same rationale as claim 16.

Appropriate correction is required.

**Claim Rejections - 35 USC § 112**

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 11 recites the limitation "the routing packet" in line 25. There is insufficient antecedent basis for this limitation in the claim.

Claim 14 is rejected based on the same rationale as claim 11.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,774,660 issued to Brendel et al.(Brendel) in view of US Patent 6,052,718 issued to Gifford.

As per claim 1, Brendel teaches a method of broadcasting from a proximal cache at a proximal internet protocol address (IPA) a routing item for indicating an originator storing web content data associated with a uniform resource locator (URL) of a web server permanently storing the web content data, the method comprising the steps of, originating URL identifier generating an originating URL identifier for indicating the URL(col.1,lines 37-64), destination IPA generating a destination IPA for indicating a destination cache(col.2,lines 29-35),

Brendel, however does not teach originating IPA generating an originating IPA for indicating the originator, associating the originating IPA and the originating URL as the routing item, and transmitting the routing item from the proximal cache at the proximal IPA to the destination cache at a destination IPA.

1           Gifford teaches originating IPA generating an originating IPA for indicating the  
2   originator(col.9, lines 19-22),associating the originating IPA and the originating URL as  
3   the routing item(col.7,lines 51-59), and transmitting the routing item from the proximal  
4   cache at the proximal IPA to the destination cache at a destination IPA(col.7,line 60-  
5   col.8,line10).

6           Therefore, it would have been obvious to one having ordinary skill in the art at  
7   the time of the invention to modify the method of Brendel to include originating IPA  
8   generating an originating IPA for indicating the originator, associating the originating IPA  
9   and the originating URL as the routing item, and transmitting the routing item from the  
10   proximal cache at the proximal IPA to the destination cache at a destination IPA as  
11   taught by Gifford in order to route request to a server that will perform well for the  
12   client(col.1,lines 33-40).

13  
14           Claims 2-6,8,9,11,12,14-17 are rejected under 35 U.S.C. 103(a) as being  
15   unpatentable over US Patent 5,774,660 issued to Brendel et al.(Brendel) in view of US  
16   Patent 6,052,718 issued to Gifford in further view of US Patent 6,546,422 issued to  
17   Isoyama et al.(Isoyama).

18  
19           Brendel in view of Gifford teaches all the limitations of claim 1, however does not  
20   teach as per claim 2,, the method of claim 1 further comprising the steps of,  
21   distance generating a distance metrics for indicating a web  
22   hop distance of a number of the plurality of cooperative web caches

1 through which the URL web content data would be communicated from  
2 the from the originator through the plurality of cooperative web  
3 caches to the proximal web cache.

4 Isoyama teaches distance generating a distance metrics for indicating a web  
5 hop distance of a number of the plurality of cooperative web caches  
6 through which the URL web content data would be communicated from  
7 the from the originator through the plurality of cooperative web  
8 caches to the proximal web cache(col.4,lines 52-62).

9 Therefore, it would have been obvious to one having ordinary skill in the art at  
10 the time of the invention to modify the method of Brendel in view of Gifford to include  
11 teaches distance generating a distance metrics for indicating a web hop distance of a  
12 number of the plurality of cooperative web caches through which the URL web content  
13 data would be communicated from the from the originator through the plurality of  
14 cooperative web caches to the proximal web cache as taught by Isoyama in order to  
15 minimize the use of network resource for caching(col.2,lines 30-31).

16 As per claim 3, the method of claim 2 wherein,  
17 the originating URL identifier is a proximal URL identifier(Brendel, col.1,lines 37-64),  
18 the originating IPA is the proximal IPA(Gifford, col.6,line 66-col.7,line 1)  
19 the proximal cache stores locally the web content data(Brendel, Fig.2), and  
20 the metric distance is one indicating that one web hop is  
21 between the destination cache to the proximal cache(Isoyama, Fig.4).

22 As per claim 4, the method of claim 2 wherein,

1 the originating URL identifier is a source URL identifier(Brendel, col.1,lines 37-64),  
2 the originating IPA is the source IPA indicating an IPA  
3 location of a source distally storing the web content data(Brendel, col.2,lines 29-35),  
4 the metric distance is greater than one indicating a number  
5 greater than one of the number of web hops between the destination  
6 cache through the proximal cache to the source distally storing the  
7 web content data(Isoyama, Fig.4).

8 As per claim 5, the method of claim 4 wherein, the source is a distal web cache  
9 distal storing the web content data, and the source IPA is a distal web cache  
10 IPA(Brendel, col.2,lines 29-35).

11 As per claim 6, the method of claim 4 wherein, the source is the web server  
12 distal permanently storing the web content data(Brendel, col.2,lines 36-39), and  
13 the source IPA is a web server IPA indicating the IPA location of the web  
14 server(Brendel, col.2,lines 29-40).

15 As per claim 8, Brendel teaches a method of broadcasting from a proximal cache  
16 at a proximal internet protocol address (IPA) a routing item for indicating a  
17 distal web cache storing web content data associated with a uniform  
18 resource locator (URL) of a web server permanently storing the web  
19 content data, the proximal web cache is a first one of a plurality  
20 of cooperative web caches, the distal web caches is a last one of  
21 the plurality of cooperative web caches, the method comprising the  
22 steps of,

1 URL identifier generating a URL identifier for indicating the web content data of  
2 the URL stored in the distal web cache(Brendel, Figs.1-3),  
3 proximal IPA generating the proximal IPA for indicating the location of the  
4 proximal cache(Brendel, col.2,lines1-9),  
5 destination IPA generating a destination IPA for indicating a destination  
6 cache(Brendel, Figs.1-3,element 18),

7 However, Brendel does not teach transmitting the routing item from the proximal  
8 cache at the proximal IPA to the destination cache at a destination IPA and distance  
9 generating a distance metric for indicating a web hop distance of any number of the  
10 plurality of cooperative web caches through which the web content data would be  
11 communicated from the distal web cache to the destination web cache,  
12 associating the proximal IPA and the URL identifier and the distance metric as the  
13 routing item.

14 Gifford teaches transmitting the routing item from the proximal cache at the  
15 proximal IPA to the destination cache at a destination IPA(Gifford, col.7,line 60-  
16 col.8,line10).

17 Therefore, it would have been obvious to one having ordinary skill in the art at  
18 the time of the invention to modify the method of Brendel to include transmitting the  
19 routing item from the proximal cache at the proximal IPA to the destination cache at a  
20 destination IPA as taught by Gifford in order to route request to a server that will  
21 perform well for the client(col.1,lines 33-40).



1           Brendel in view however does not teach distance generating a distance metric for  
2   indicating a web hop distance of any number of the plurality of cooperative web caches  
3   through which the web content data would be communicated from the distal web cache  
4   to the destination web cache (Isoyama, col.4,lines 52-62), associating the proximal IPA  
5   and the URL identifier and the distance metric as the routing item(Isoyama, Fig.4).

6           Therefore, it would have been obvious to one having ordinary skill in the art at  
7   the time of the invention to modify the method of Brendel in view of Gifford to include  
8   distance generating a distance metric for indicating a web hop distance of any number  
9   of the plurality of cooperative web caches through which the web content data would be  
10   communicated from the distal web cache to the destination web cache as taught by  
11   Isoyama in order to minimize the use of network resource for caching(col.2,lines 30-31).

12           As per claim 9, the method of claim 8 wherein, the distance metric is greater than  
13   one indicating a number greater than one of the number of web hops between the  
14   destination cache through the proximal cache to the distal web cache storing  
15   the web content data(Isoyama, Fig.4).

16           As per claim 11, the method of claim 8 further comprising the steps of,  
17   repeating the URL identifier generating step(Brendel, col.1,lines 37-64), proximal IPA  
18   generating step(Brendel, Fig.2), distance generating step(Isoyama, Fig.4), the  
19   associating step (Isoyama, Fig.4); it is implicit to repeat the steps of URL generating,  
20   proximal IPA generating, distance generating, and associating because there are  
21   multiple items in the cache therefore, these steps are necessary for accessing the

1 multiple items in the cache, a plurality of times for generating a plurality of routing items  
2 each comprising a URL identifier and a respective distance metric, and  
3 incorporating the plurality of routing items within a protocol  
4 data structure within the routing packet prior to the transmitting  
5 step, the routing protocol packet comprising the URL and a  
6 respective distance metrics(Isoyama, Fig.4)and comprising the proximal IPA and the  
7 destination IPA(Gifford, col.7,line 60-col.8,line10,Brendel,Fig.7).

8 As per claim 12, Brendel teaches a method of broadcasting from a proximal  
9 cache at a proximal internet protocol address (IPA) a routing item for indicating a  
10 distal web cache storing web content data associated with a uniform  
11 resource locator (URL) of a web server permanently storing the web  
12 content data, the proximal web cache is a first one of a plurality  
13 of cooperative web caches, the distal web caches is a last one of  
14 the plurality of cooperative web caches, the method comprising the  
15 steps of,

16 URL identifier generating a URL identifier of the plurality of URL identifiers, the  
17 URL identifier for indicating the web content data of the URL stored in the distal  
18 web cache(Brendel, Figs.1-3),

19 proximal IPA generating the proximal IPA for indicating the location of the  
20 proximal cache(Brendel, col.2,lines1-9),

21 destination IPA generating a destination IPA for indicating a destination  
22 cache(Brendel, Figs.1-3,element 18),

1           However does not teach associating the proximal IPA and the URL and the  
2 distance metrics as the routing item, and transmitting the routing item in a routing  
3 packet within a routing protocol from the proximal cache at the proximal IPA to the  
4 destination cache at a destination IPA, storing in a routing table a plurality of URL  
5 identifiers cross referenced a respective plurality of distance metrics, distance  
6 generating a distance metrics by cross referencing the URL identifier to one of the  
7 plurality of URL identifiers and to a respective one of the plurality of distance metrics for  
8 indicating a web hop distance of any number of the plurality of cooperative web caches  
9 through which the web content data would be communicated from the distal web cache  
10 to the destination web cache.

11           Gifford teaches associating the proximal IPA and the URL and the distance  
12 metrics as the routing item (Gifford, col.7,lines 51-59), and transmitting the routing item  
13 in a routing packet within a routing protocol from the proximal cache at the proximal IPA  
14 to the destination cache at a destination IPA(Gifford, col.7,line 60-col.8,line10).

15           Therefore, it would have been obvious to one having ordinary skill in the art at  
16 the time of the invention to modify the method of Brendel to include associating the  
17 proximal IPA and the URL and the distance metrics as the routing item, and transmitting  
18 the routing item in a routing packet within a routing protocol from the proximal cache at  
19 the proximal IPA to the destination cache at a destination IPA as taught by Gifford in  
20 order to route request to a server that will perform well for the client(col.1,lines 33-40).

21           Brendel in view of Gifford does not teach storing in a routing table a plurality of  
22 URL identifiers cross referenced a respective plurality of distance metrics, distance

1 generating a distance metrics by cross referencing the URL identifier to one of the  
2 plurality of URL identifiers and to a respective one of the plurality of distance metrics for  
3 indicating a web hop distance of any number of the plurality of cooperative web caches  
4 through which the web content data would be communicated from the distal web cache  
5 to the destination web cache.

6 Isoyama teaches storing in a routing table a plurality of URL identifiers cross  
7 referenced a respective plurality of distance metrics (Isoyama, col.4,lines 52-62),  
8 distance generating a distance metrics by cross referencing the URL identifier to one of  
9 the plurality of URL identifiers and to a respective one of the plurality of distance metrics  
10 for indicating a web hop distance of any number of the plurality of cooperative web  
11 caches through which the web content data would be communicated from the distal web  
12 cache to the destination web cache(Isoyama, col.4,lines 34-62),

13 Therefore, it would have been obvious to one having ordinary skill in the art at  
14 the time of the invention to modify the method of Brendel in view of Gifford to include a  
15 routing table a plurality of URL identifiers cross referenced a respective plurality of  
16 distance metrics, distance generating a distance metrics by cross referencing the URL  
17 identifier to one of the plurality of URL identifiers and to a respective one of the plurality  
18 of distance metrics for indicating a web hop distance of any number of the plurality of  
19 cooperative web caches through which the web content data would be communicated  
20 from the distal web cache to the destination web cache as taught by Isoyama in order to  
21 minimize the use of network resource for caching(col.2,lines 30-31).

1           Claim 14 is of the same scope as claim 11, therefore is rejected based on the  
2 same rationale (see claim 11 rejection).

3           As per claim 15, the method of claim 12 wherein, the storing steps creates a  
4 routing table for cross referencing the plurality of URL identifiers to the plurality of  
5 distance metrics (Isoyama, Fig.4) and to one or more juxtaposed cooperative web  
6 caches IPAs of one or more juxtaposed cooperative web caches of the cooperative  
7 web caches, the one or more juxtaposed cooperative web caches for routing URL  
8 identifiers to distal web caches storing the web content data of the respective plurality of  
9 URL identifiers(Brendel, Fig.5).

10          As per claim 16, the method of claim 15 wherein the proximal cache and the one  
11 or more juxtaposed cooperative web caches being within a local  
12 group of cooperative web caches(Brendel, Fig.2; the examiner interprets that the  
13 servers of Fig.2 is juxtaposed cooperative web caches).

14          As per claim 17, the method of claim 16 wherein the proximal cache is within one  
15 or more local groups of cooperative web caches(Brendel, Fig.2; it is inherent that the  
16 proximal cache could be on of the servers).

17  
18          Claims 7,10,13 are rejected under 35 U.S.C. 103(a) as being unpatentable over  
19 US Patent 5,774,660 issued to Brendel et al.(Brendel) in view of US Patent 6,052,718  
20 issued to Gifford in further view of US Patent 6,701,415 issued to Hendren,  
21 III(Hendren).

22

1           Brendel in view of Gifford teaches all the limitations of claim 1 and an exact URL  
2 identifier being an exact URL comprising a plurality of URL  
3 components(Brendel, col.1,lines 37-63), and the originating URL identifier is selected  
4 from the group consisting of, a wildcard URL identifier being a wildcard URL comprising  
5 a plurality of URL components a last URL component of which being a wildcard  
6 component(Brendel, col.2, lines 19-28) however does not teach as per claim 7, the  
7 method of claim 1, wherein a coded URL identifier being a coded URL comprising a  
8 seriesof hashing codes of a decomposed URL being a decomposition of the  
9 URL selected from the group consisting of either an exact URL or a  
10 wildcard URL each of which comprising a series of URL components,  
11 the series of hashing codes being a sequence of hashing codes of respective URL  
12 segments of a respective series of increasingly concatenated URL components of the  
13 series of URL components of the URL.

14           Hendren teaches a coded URL identifier being a coded URL comprising a series  
15 of hashing codes of a decomposed URL being a decomposition of the  
16 URL selected from the group consisting of either an exact URL or a  
17 wildcard URL each of which comprising a series of URL components,  
18 the series of hashing codes being a sequence of hashing codes of respective URL  
19 segments of a respective series of increasingly concatenated URL components of the  
20 series of URL components of the URL(col.2,lines 37-47).

21           Therefore, it would have been obvious to one having ordinary skill in the art at  
22 the time of the invention to modify the method of Brendel in view of Gifford to include a

1 coded URL identifier being a coded URL comprising a series of hashing codes of a  
2 decomposed URL being a decomposition of the URL selected from the group consisting  
3 of either an exact URL or a wildcard URL each of which comprising a series of URL  
4 components, the series of hashing codes being a sequence of hashing codes of  
5 respective URL segments of a respective series of increasingly concatenated URL  
6 components of the series of URL components of the URL as taught by Hendren in  
7 order to select one of a plurality of caches(col.3, lines 17-22)

8 Claims 10 and 13 are of the same scope as claim 7, therefore is rejected based  
9 on the same rationale (see claim 7 rejection).

10 **Conclusion**

11 Any inquiry concerning this communication or earlier communications from the  
12 examiner should be directed to Backhean Tiv whose telephone number is (703) 305-  
13 8879. The examiner can normally be reached on 9 A.M.-12 P.M. and 1 -6 P.M.  
14 Monday-Friday.

15 If attempts to reach the examiner by telephone are unsuccessful, the examiner's  
16 supervisor, Glenton B Burgess can be reached on (703) 305-4792. The fax phone  
17 number for the organization where this application or proceeding is assigned is 703-  
18 872-9306.

Art Unit: 2151

1 Information regarding the status of an application may be obtained from the  
2 Patent Application Information Retrieval (PAIR) system. Status information for  
3 published applications may be obtained from either Private PAIR or Public PAIR.  
4 Status information for unpublished applications is available through Private PAIR only.  
5 For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should  
6 you have questions on access to the Private PAIR system, contact the Electronic  
7 Business Center (EBC) at 866-217-9197 (toll-free).

8

9  
10 BT  
11 Backhean Tiv  
12 2151  
13 5/12/04  
14

Andrew Caldwell  
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